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CH-47

accident

summary

MAJORS, MINORS, INCIDENTS,
FORCED LANDINGS, PRECAUTIONARY LANDINGS

CH-47 ACCIDENT SUMMARY

1 July 1966 through 30 June 1967

by
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Education and Literature Division



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CH-47 Accident Summary

1 JULY 66 THROUGH 30 JUNE 67

INTRODUCTION

This summary was prepared to help commanders at all levels, aviation safety officers, maintenance officers, aviators, and related aviation personnel to prevent future accidents and preserve combat resources through a review of CH-47 mishaps and their cause factors. The term "mishap," as used in this summary, includes accidents, incidents, forced landings, and precautionary landings, as defined by paragraph 7, AR 385-40. Aircraft losses or damages which were the direct result of hostile action in RVN are not included. Information presented in this summary was taken from accident and other mishap reports submitted from all Army commands, as required by section IV, AR 385-40. Information on Modification Work Orders (MWO's) was furnished by USA-AVCOM.

STATISTICS

Table 1 shows total CH-47 mishaps from the time of the introduction of the helicopter into the Army inventory through FY 1967. While major and minor accidents each were up three for FY 1967, the accident rate per 100,000 flying hours, shown in table 2, decreased 5.2 since FY 1966. The accident rate has decreased 57.1 overall since CH-47 aircraft entered the inventory.

Incidents, mishaps resulting in damage which does not meet accident classification criteria, were up 6

(17%) during FY 1967. The increased cost of accidents and incidents, up \$4,212,000 (55%) over FY 1966, is shown in table 3. CH-47 mishap costs accounted for about 12% of the \$96,000,000 total costs of all Army aircraft mishaps during FY 1967.

Table 4 shows the number of occupants aboard for all accidents and the number sustaining fatal and nonfatal injuries. Of the 15 FY 1967 accidents, 80% (12) were survivable. Overall, 84% (31) of 37 accidents were survivable. Two of 119 occupants in survivable accidents were killed.

CAUSE FACTORS

The majority of Army aircraft accidents involve pilot factors. This is true also for the CH-47, evidenced by the FY 1967 major and minor accident briefs presented in this summary. The majority of total mishaps, however, resulted from failures and malfunctions, illustrated by the incident, precautionary landing, and forced landing briefs, selected as representative samples of the most frequently recurring types and their cause factors. Mishap cause factors included were crew error, inadequate and improper maintenance, inadequate facilities, inadequate supervision, weather, materiel malfunction, and inadequate unit training.

Cause factors for many mishaps are reported as "suspected" or "unknown." This is particularly true for incidents, forced landings, and precautionary

TABLE 1
CH-47 Mishap Classification

FY	MAJ	MIN	INCD	F/L	P/L	TOTAL
1963	3	0	4	12	0	19
1964	4	1	2	7	18	32
1965	6	0	5	4	51	66
1966	9	0	35	10	65	119
1967	12	3	41	22	98	176
TOTAL	34	4	87	55	232	412

TABLE 2
CH-47 Accident Rates Per 100,000 Flying Hours

FY	NO. OF ACDS	HR. FLOWN	RATE
1963	1	1,384	72.2
1964	3	5,557	54.0
1965	2	13,519	14.8
1966	9	44,337	20.3
1967	15	99,430	15.1
TOTAL	30	164,227	18.3

TABLE 3
Approximate CH-47 Mishap Dollar Cost

FY	WORLD-WIDE LESS RVN	RVN	TOTAL
1963	\$ 99,000	0	\$ 99,000
1964	3,792,000	0	3,792,000
1965	2,923,000	0	2,923,000
1966	1,192,000	\$ 6,460,000	7,652,000
1967	123,000	11,741,000	11,864,000
TOTAL	\$8,129,000	\$18,201,000	\$26,330,000

landings. For an effective safety program, specific cause factors must be known. Insufficient information or lack of supplemental information about specific cause factors results in wasted effort, time, and resources.

The chance to gain prevention information from forced and precautionary landings is much greater than that for other mishaps because the crews involved in these were able to successfully cope with inflight emergencies and land without damage. If the full circumstances that brought about the emergencies and the techniques used to cope with them could be shared and learned by all, Army aviators would be in a far better position to prevent accidents resulting from similar factors.

CONCLUSIONS

A concerted effort on the part of commanders and supervisors at all levels is needed to achieve a more effective safety program. This can best be accomplished through:

Knowledge of past mishap experience and cause factors, available through aircraft accident summaries such as this, Weekly and Monthly Accident Summaries, and the Crash Sense Department of the U. S. ARMY AVIATION DIGEST. Distribution of Weekly and Monthly Accident Summaries may be obtained by writing to: Director, USABAAR, ATTN: ELD, Fort Rucker, Alabama 36360. Distribution of the U. S. ARMY AVIATION DIGEST may be obtained by submitting DA Form 12-4 in accordance with instructions on the back of the form.

Prevention Surveys conducted on a revolving basis to isolate potential hazards in facilities, equipment, and personnel. Copies of the Aircraft Accident Prevention Survey prepared by USABAAR may be obtained by writing to: Director, USABAAR, ATTN: ELD, Fort Rucker, Alabama 36360.

Effective Prevention Planning, as outlined in part 1, AR 95-5.

Implementation of Unit Safety Programs, as outlined in appendix VI, AR 95-5.

Increased Command Emphasis on investigation and reporting of incidents, forced landings, and precautionary landings, to include *all* information required by paragraph 23e, AR 385-40.

TABLE 4
CH-47 Occupant Injuries

FY	Acdts		Occupants					
			Injury Classification			Total on Board Aircraft		
			Fatal		Nonfatal	None	Survivable Acdts	Nonsurvivable Acdts
	S	NS						
1963	3	0	0	0	0	12	12	0
1964	4	0	0	0	3	10	13	0
1965	5	1	1	3	1	14	16	3
1966	7	2	2	27	23	22	47	27
1967	12	3	2	22	37	80	119	22
TOTAL	31	6	5	52	64	138	207	52

S - Survivable
NS - Nonsurvivable

Selected Major Accident Briefs

F457—During a reconnaissance and firing mission, engine torque needles spun rapidly before second firing run and No. 2 engine egt was 750° and rising. Firing run was continued, since no warning lights came on and there was no indication of any other trouble. No. 2 egt increased to maximum and fire started in engine. Fire bottle was activated, but failed to extinguish fire. No. 2 engine was shut down and torque needle of No. 1 engine stabilized at 900 pounds torque. A forced landing was made with a descent of 500 fpm, at 60-70 knots, with a full flare to lessen forward speed and reduce the rate of descent. Thrust was applied and rotor rpm was reduced to about 190 to clear trees and high stumps. Aircraft landed hard, damaging fuselage and structural bulkheads. Caused by failure of No. 2 engine while operating at a gross weight in excess of single engine capability over unsuitable landing terrain. No. 2 engine fuel control was improperly adjusted by unqualified personnel during delivery processing. Fuel control was adjusted so that N₂ power lever traveled 22° minimum to 85° maximum. It should have been 13°-17° minimum to 75° maximum. This resulted in excessive fuel flow and caused engine damage, failure, and fire. Engine had 50-hour history of high egt's and control malfunctions.

F751—Ground contact was lost due to 200-foot overcast with jagged scud during night evac takeoff. Searchlight was turned off to reduce glare and artificial horizon was interpreted to indicate nose low attitude. Nose was raised, power reduced, and searchlight turned on again to attempt to establish ground reference. Nose continued to pitch up as aircraft began descending and accelerating rearward and downward. Aft blades struck tree and aircraft skidded 15 feet on aft wheels and right side of ramp before pitching near vertical. Ramp gouged a 24-inch hole in ground. Aircraft arched over backward, nose over tail, with right side slightly low, hitting ground

with upper right side of each rotor head. Aft pylon separated and aircraft rolled on right side. Litter patient and one passenger were killed. Four crewmembers and four passengers sustained major injuries, and one crewmember had critical injuries. Caused by noninstrument-rated pilots taking off into instrument flight conditions.

F949—Forward rotor blades of taxiing aircraft struck aft rotor blades of parked CH-47. Aircraft became airborne to about 16 feet and spun to right. Forward transmission and mast separated from aircraft, aft section split from main portion of cargo area, and aircraft fell on right side, breaking in half. Parked aircraft sustained major damage to skin of aft pylon and aft and center cabin sections and to hydraulic plumbing. One crewmember sustained major injuries and six sustained minor injuries. Caused by (1) taxiing too close to parked aircraft, (2) lack of parking spots and ground guides, (3) inability of guide to converse with AC on interphone, and (4) lack of individual initiative and team effort in recognizing and reacting to a dangerous situation.

G497—No. 1 engine failed during climbout while sling loading M-102 and water blivet. Restart attempt was unsuccessful and sling load could not be released by means of cyclic stick button or overhead emergency release switch. Aircraft settled on sling load during touchdown, damaging skin on underside. Aft rotor blades hit tree, breaking blades and ripping aft transmission and pylon loose. Forward blades struck tree, damaging blades. Caused by crew failing to use all emergency procedures (manual release of D-ring) to jettison sling load. Cause of engine failure unknown pending teardown analysis.

H225—Aircraft disintegrated at about 3,000 feet, separating into two flaming parts before striking ground. All five crewmembers killed. Caused by failure to safety upper nut on pin attaching aft speed trim actuator to swashplate and by improper technical inspection of aft speed trim actuator after removal and installation. The loss of upper longitudinal speed trim actuator bolt from aft rotor swashplate attaching lug caused aft swashplate, controlling aft rotor blades, to become unstable. This caused extreme flapping of aft rotor blades, allowing blades to strike fuselage and break off. Unbalance of rotor head caused aft pylon to separate in flight.

011506—Aircraft disintegrated in air. Six crew-

052218-Aircraft vibrated during right turn at 3-foot hover and landed with left gear off pad.

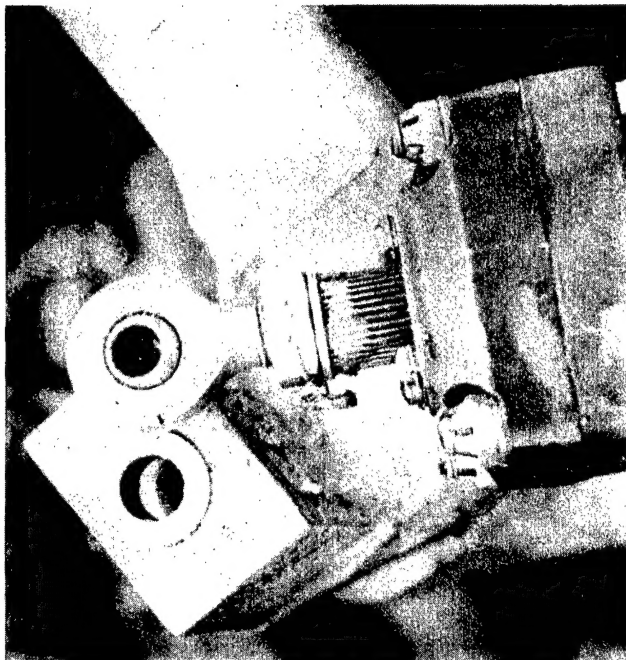


members and three passengers killed. Caused by fatigue failure of spar of one aft rotor blade at station 200.5.

020104-Rotor rpm decreased during takeoff with internal load of 40 troops, and pilot tried to increase rpm with beep trim. Thrust was decreased without increasing rpm. Thrust was applied just before touch-down to cushion landing. Right aft and left forward gear touched down on edge of 10-foot embankment, and aircraft moved forward and to left, rolling off embankment. Aircraft settled on upper left side, damaging forward underside of fuselage, rotors, transmissions, and No. 1 engine, and buckling skin on upper left and right sides of fuselage. Probably caused by attempting uphill takeoff over rough terrain with aircraft at or near maximum gross weight.

031621-Aircraft was landed to pick up internal load. Cyclic was inadvertently pushed forward, raising aft gear off ground and allowing ramp to drop below aft wheel level. Aft cyclic was applied and ramp jammed into ground. Caused by (1) failing to insure cyclic stick was in "neutral" and thrust lever was in "3° detent" position, (2) failing to insure ramp control lever was in "stop" position, and (3) rapidly applying aft cyclic.

062506-Excessive power was required for acceleration and climb and pilot elected to return to take-off site. Smoke was noted in aft pylon and forced landing initiated. Master caution light came on three times during descent and 230 rotor rpm could not be maintained. Thrust was applied on touchdown, decaying rpm to 190. Crew cleared aircraft and aft pylon burned through and fell away, allowing ruptured main fuel lines to feed fire. Internal ammunition load exploded, destroying aircraft. Cause of accident unknown due to destruction of aircraft. Suspect failure of aft vertical shaft thrust bearing.



011506-Fatigue failure of aft rotor blade spar caused aircraft to disintegrate during flight.



H225-Loss of upper longitudinal speed trim actuator bolt from aft rotor swashplate attaching lug caused by failure to safety upper nut on pin.

Selected Minor Accident Briefs

G221—Droop stop bumping occurred during test flight. Aircraft was landed at home base and shut down. As rotors slowed to about 30 rpm, aft blades struck fuselage, damaging left side outer skin, stringers, and formers. Caused by droop stop failure on aft rotor. Accident investigation board recommended that rotor heads be modified to incorporate new centrifugal droop stops.

031802—Brakes were locked, thrust lever lowered, and controls centered while off-loading troops. SAS was flipped to "release" position and rotor rpm dropped to minimum. Aircraft tipped forward after troops were off-loaded. As cyclic was pulled to full aft position, bottom front of aircraft and forward rotor blades struck ground and aircraft turned right and vibrated violently. Engine condition lever was pulled

to "stop" and aircraft continued turn, stopping approximately 330° from original heading. Minor damage to right front landing gear, fuselage, forward rotor blades, antenna, pylon, and plexiglass. Seat cushions of both seats in cockpit came loose. Caused by either inadvertently placing controls forward while pilots were directing attention to map, or by failing to put control centering switch in "on" position after landing, and then momentarily releasing cyclic.

052218—Medium-to-high frequency vibration felt during right turn at 3-foot hover. Aircraft was landed on pad with aft left gear in drainage ditch approximately 1 foot below pad, and unmarked warning light came on. Controls were centered and both engine condition levers moved to "ground." Aft rotor blades struck tunnel cover and fuselage, causing hole in skin. Warning light was "wheel dephase" warning light and was not properly identified. Caused by (1) landing aircraft with high tailwind, (2) landing with aft left gear off pad, (3) landing with swivel locks in "unlocked" position, making control extremely difficult, (4) operating in downwind condition due to placement of sandbag barriers, (5) materiel failure of droop stops, allowing blades to strike fuselage, and (6) lack of proper warning lights.

Selected Incident Briefs

G126—Sling-loaded 105 Howitzer tipped forward when set down. Aircraft drifted forward and trails punctured fuselage, damaging skin aft of cargo hatch. Improper rigging and lack of crew coordination were factors.

G369—Bird hit left windshield, causing incident damage.

G421—Hoist pulley broke loose from mounting point while hoisting equipment from small clearing. Cable snapped and whipped inside aircraft, tearing soundproofing and damaging floor and overhead stringer. Pulley failure caused by overload.

G644—Right pilot emergency exit came off, damaging exit. Suspect inadequate engagement of retaining mechanism.

G711—Clevis attaching metal cable to nylon strap broke while lifting sling load, and stretched strap shot clevis upward into bottom of aircraft, damaging aircraft bottom.

G741—Aft rotor struck tree limb during maximum gross load approach to confined area, damaging aft blade.

H041—No. 1 engine lower cowling came loose, damaging cowling. Suspect failure of cowling hatch.

H080—Aft rotor tip caps hit tree during approach to

confined area, damaging tip caps. Caused by excessive flare during termination of approach.

H296—Rotorwash sucked overhanging limbs down into aft rotor during takeoff from confined area, damaging aft rotor blades.

H394—Rear wheels slid on wet PSP during left turn to parking area, causing forward main rotor tip caps to strike aft tail section of parked CV-2, damaging tip caps of taxiing aircraft and tail section of CV-2. Gusty winds and rain considered factors.

H483—Aircraft was on ground waiting to be loaded when 1/4-ton truck hit forward rotor blades, damaging blades.

H592—Severe vertical and lateral vibrations were felt on short final. Pitch was bottomed at approximately 10-20 feet due to lack of control and aircraft landed hard, damaging rear landing gear and fuselage. Fluctuation of No. 1 generator output voltage caused SAS links to oscillate.

010606—Troops were being off-loaded in LZ when smoke grenade tossed from overhead UH-1 struck rotor blades of CH-47, causing 1-inch hole.

011117—During drop of 250-gallon external water blivet, load rolled forward, causing hook to strike utility hydraulic quick disconnect, severing quick disconnect from hydraulic line and rendering utility system inoperative. Incident damage to quick disconnect.

011614—Pilot inadvertently released cyclic control of parked aircraft while centering switch was in

"off" position, and aircraft nosed over, damaging chin bubble and skin on underside of nose section.

030817—Aft rotor blades struck telephone pole wire during ground taxi to parking slot, damaging two aft rotor blades and three blade caps.

032705—No. 1 tunnel cover flew off into forward red blade, damaging No. 1 and No. 2 tunnel covers and forward red blade. Caused by latch failure.

041305—Tube of 105 Howitzer punctured hole in left fuel cell pod during external pickup, damaging pod.

050502—Aft gear struck rock during approach to mountain helipad, damaging aft landing gear.

052105—As aircraft was being shut down, rotor-wash from another aircraft caused rotor blade to flex down and hit transmission tunnel, damaging blade tip and tunnel cover.

062108—Red blade droop stop lost from aft rotor head, damaging aft main rotor blade, aft rotor hub, aft rain shield, and aft pylon skin. Caused by failure of droop stop retaining bolts.

Selected Forced Landing Briefs

G013—Oil leak noted in forward transmission. Caused by failure of helicoil on stud retaining oil filter to transmission.

G036—No. 2 engine flamed out at about 50 feet and 25 knots after takeoff. Caused by ingestion of heavy wrapping paper into air intake, restricting airflow.

G132—Forward transmission lost oil. Caused by stripped threads on oil filter retaining bolt. Suspect overtightened bolt.

G652—No. 1 generator came off line and would not reset. Smoke poured out of d.c. compartment on left forward side of aircraft. Caused by failure of 24-volt storage battery.

G781—Oil lost from forward transmission. Caused by overtightened retaining studs.

H083—No. 2 hydraulic boost lost power. Caused by failure of preformed packing of aft upper boost actuator "B" nut.

H658—No. 1 transmission warning light came on and No. 1 torque dropped. Crew heard explosive sound and felt unusual vibration. Caused by failure of output shaft bearing in No. 1 engine transmission.

010702—No. 2 engine flamed out. Caused by defective fuel control.

021509—Loud banging noise heard from forward section. Caused by failure of forward transmission.

041405—Pilot felt heavy one-per-revolution vibration and aircraft pitched. Caused by separation of

4-6 inches of No. 11 pocket from spar on aft yellow blade.

040709—Loud banging noise was heard from engine area and aircraft vibrated. Caused by failure of first stage compressor blades.

051019—Unusual noise heard from aft transmission. Hydraulic tube came loose from No. 2 hydraulic manifold and fluid sprayed over aft cabin section. Caused by failure of No. 2 boost pump and line.

052221—No. 1 engine failed during landing approach. Both float switches failed in "closed" position. Left forward float switch failed because float housing was bent, causing float to bend on aluminum housing. Left aft float failed because reed switch putty compound expanded, causing reed switch to move one-fourth out of its operating point.

Selected Precautionary Landing Briefs

F445—No. 1 engine lost power. Caused by failure of bleed band actuator.

F486—Hydraulic system failed. Caused by failure of "O" ring in forward swivel actuator.

F534—Abnormal shuddering vibration occurred while leveling off from climb and torque needles fluctuated. Caused by malfunction of No. 1 engine fuel control unit which caused engine rpm to surge.

F664—No. 1 engine chip detector warning light came on. Caused by metal particles on magnetic plug.

F799—No. 2 engine fire warning light came on. Caused by bracket which secures fire warning circuit under combustor breaking loose from mounting, causing fire detector to sense heat and activate warning system.

F837—Master caution light came on and oil pressure read 10 psi. Caused by failure of upper combining transmission oil cooler elbow. Cracked fitting caused by overtightening.

F904—Oil low warning light came on. Caused by leak in preformed packing between temperature bulb and oil tank case. Packing improperly aligned during installation.

F977—Aircraft vibrated. Caused by malfunction of viscous dampener on fore and aft cyclic control.

G267—Unusual noises heard from forward transmission area and chip detector warning light came on. Input pinion gear retaining nut backed off. MWO required by TB 55-1560-200-40/1 not complied with.

G310—Vaporized hydraulic fluid leaked from control closet. Caused by chafed line in No. 1 hydraulic boost system.

G472—Electrical equipment malfunctioned. Caused by failure of No. 1 SAS yaw link.

G487—Transmission oil pressure dropped to zero and warning light came on. Caused by defective oil pressure indicator.

G510—No. 2 engine lost power. Caused by FOD to compressor blades.

G722—Aircraft vibrated excessively. Caused by broken lord mount spring on No. 7 section of synchronized drive shaft.

G765—Pilot heard loud pop, followed by growling noise, and felt high frequency vibration. Caused by input pinion shaft bearing retaining nut backing off, destroying aft roller bearings. Inspection of nut showed ineffective staking in that no threads had been damaged.

H057—Transmission oil pressure warning light came on. Caused by malfunction of selector switch.

H154—No. two 90° gearbox temperature rose. Caused by failure of temperature bulb.

H254—No. two 90° gearbox temperature rose. Caused by broken wire in cannon plug.

H466—Flight control hydraulic pressure lost. Caused by chafed tube assembly.

H675—Hydraulic fluid leaked from aft transmission compartment. Rubber grommet on adel clamp supporting line deteriorated and allowed clamp to chafe line, causing small hole.

010519—No. 1 rocket pod caught fire on firing run and could not be jettisoned manually or electrically. The 2.75 rocket warhead separated from rocket motor when fired, allowing motor to burn in pod. Failure to jettison caused by overtorque of azimuth aligning bolts on MA4A bomb rack, causing binding of suspension lugs.

011016—Forward transmission oil temperature rose to 135°. Oil cooler was clogged with straw and dirt.

011308—No. 1 generator inoperative. Caused by failure of electrical terminal.

020112—No. 1 engine would not accelerate from "ground" to "flight" position. N1 did not increase and egt rose to 900°C. Caused by fuel control failure.

021405—Oil leaked in aft pylon area. Caused by failure of combining gearbox oil cooler.

022418—No. 2 SAS was erratic in pitch and yaw. Caused by malfunction of SAS link.

030408—No. 1 engine failed. No. 2 bearing and second stage N₂ nozzle were found damaged and start fuel line broken. Suspect No. 2 nozzle was damaged by foreign object thrown through exhaust system.

031711—Oil leak noted in transmission area. Combining gearbox oil reservoir filler cap found open.

031111—Aircraft was caught in downdraft and descended rapidly from 3,500 to 1,000 feet. Transmission air cooler fan casing broke during recovery from abrupt descent, allowing drive shaft to fall against drive shaft cowl, severing drive shaft. Caused by unexpected severe turbulence.

040420—Transmission chip detector warning light came on. Caused by electrical short in wire at plug connection.

042903—Pilot felt vibrations in controls while aircraft was at 3-foot hover. Caused by failure of bolt on upper pitch change link due to improper stackup of bushings in pitch change horn. One bushing was not installed, allowing excessive play on bolt and causing it to shear.

051111—Accessory warning lights came on. Caused by short due to water in pylon electrical cannon plugs.

051612—Unusual grinding noise was heard and there was a high frequency vibration in transmission area. Caused by failure of hydraulic pump.

062109—Sharp shearing noise was heard from forward rotor area during landing and high vibrations felt in control pedals and cyclic, accompanied by a rubbing noise. Forward synchronized drive shaft adapter failed through bolt hole of one leg.

062309—Heavy three-per-revolution vertical vibration occurred. Caused by failure of mechanical linear actuator.

Component Replacement Retirement Schedule

This component replacement and retirement schedule is provided for information purposes only and is not to be used as a replacement or a supplement to the -20 Maintenance Manual.

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Forward rotary wing drive transmission	114D1001-1	150	*	
	-3	150	*	
	-6	150	*	
	-8	200	*	
	-10	200	*	
	-12	200	*	
	-13	200	*	
	-14	800	*	
	-15	200	*	
	-16	200	*	
	-17	400	*	
	-18	800	500	
	-19	800	500	
	-20	800	500	
	-21	800	500	
	-22	800	500	
	-23	800	500	
	-25	800	500	
	-26	800	500	
	-27	1200	600	
	-28	1200	1200	
	-501	400	*	
	-502	800	500	
	-516	800	500	
	-517	800	500	
	-518	800	500	
	-519	200	*	
	-520	200	*	
	-521	200	*	
	-522	200	*	
	-523	800	*	
	-524	200	*	
	-525	200	*	
	-526	400	*	
	-527	800	500	
	-528	800	500	
	-529	800	500	
	-530	800	500	
	-531	800	500	
	-532	800	500	
	-534	400	*	
	-535	800	500	
	-550	800	500	
	-551	800	500	
	-552	400	*	
	-553	400	*	

*Shall not be installed in the aircraft model indicated.

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Forward rotary wing drive transmission	114D1200-1	600	600	
	-2	600	600	
	114DK102-4	400	*	
	-7	400	*	
Aft rotary wing drive transmission	114D2001-1	150	*	
	-3	150	*	
	-7	200	*	
	-8	200	*	
	-9	600	*	
	-12	200	*	
	-13	400	*	
	-14	400	*	
	-15	400	*	
	-16	600	*	
	-17	600	*	
	-18	600	*	
	-19	600	*	
	-20	600	*	
	-21	600	*	
	-22	1200	600	
	-23	1200	600	
	-24	1200	600	
	-25	1200	600	
	-26	1200	600	
	-27	1200	600	
	-28	1200	1200	
	-501	400	*	
	-502	600	*	
	-517	1200	600	
	-518	1200	600	
	-519	1200	600	
	-520	150	*	
	-521	150	*	
	-522	200	*	
	-523	200	*	
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	-525	200	*	
	-526	400	*	
	-527	400	*	
	-528	400	*	
	-529	600	*	
	-530	600	*	
	-531	600	*	
	-532	600	*	
	-533	600	*	
	-534	600	*	
	-535	1200	600	
	-536	1200	600	
	-537	1200	600	
	-538	400	*	
	-539	600	*	
	-554	1200	600	

*Shall not be installed in the aircraft model indicated.

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Aft rotary wing drive transmission	114D2001-555	1200	600	
	-556	1200	600	
	-557	400	*	
	-558	600	*	
	-559	600	*	
	-560	1200	600	
	114D2200-1	600	600	
	-2	600	600	
	114DK102-5	400	*	
	114DK203-1	600	*	
	-4	600	*	
Engine combining transmission	114D5001-1	150	*	
	-4	150	*	
	-8	600	*	
	-9	600	*	
	-10	600	*	
	-11	600	*	
	-12	600	*	
	-13	1200	1200	
	-14	600	*	
	-15	1200	1200	
	-16	1200	1200	
	-17	1200	1200	
	-18	1200	1200	
	-19	1200	1200	
	-20	1200	1200	
	-516	150	*	
	-517	150	*	
	-518	600	*	
	-519	600	*	
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	-523	1200	1200	
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	-528	1200	1200	
	-529	600	*	
	-530	600	*	
	-531	600	*	
	-532	600	*	
	-533	600	*	
	-534	600	*	
	-535	1200	1200	
	114DK504-1	600	*	
	-2	600	*	
	-3	600	*	
	-4	600	*	

*Shall not be installed in the aircraft model indicated.

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Engine combining transmission	114DK504-5	600	*	
	-6	600	*	
	-7	1200	1200	
Engine transmission	114D6001-1	50	*	
	-3	50	*	
	-4	50	*	
	-5	50	*	
	-6	250	*	
	-7	400	*	
	-8	400	*	
	-9	400	*	
	-10	400	*	
	-11	400	*	
	-12	500	*	
	-13	400	*	
	-14	500	*	
	-15	1200	*	
	-16	1200	1200	
	-17	1200	1200	
	-18	1200	1200	
	-19	1200	1200	
	-501	500	*	
	-502	1200	*	
	-503	1200	1200	
	-504	1200	1200	
	-505	1200	1200	
	-506	1200	1200	
	114DK603-1	400	*	
	-4	400	*	
Aft rotary wing drive shaft (vertical shaft)	114D3002-1	100	*	
	-3	100	*	
	-4	100	*	
	-5	1000**	*	
	-6	1000**	*	
	-7	1600	1600	
	-8	1600	1600	
Synchronizing drive shaft assembly	114D3046-1	1800	1800	
	114D3048-1	1800	1800	
	-5	1800	1800	
	-6	1800	1800	
	-7	1800	1800	
	-8	1800	1800	
	-9	1800	1800	
	114DK300-2	1800	1800	
	-3	1800	1800	
	114D3070-1	1800	1800	
	-3	1800	1800	
	-4	1800	1800	
	-5	1800	1800	
	-6	1800	1800	

*Shall not be installed in aircraft model indicated.

**Note: Temporary retirement intervals (Finite lives) for 114D3002-5 and -6 shaft assemblies as listed in TM 55-1520-209-20 shall be adhered to.

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Synchronizing drive shaft assembly	114D3070-7	1800	1800	
	-8	1800	1800	
	114D3072-1	1800	1800	
	-3	1800	1800	
Synchronizing drive shaft adapters	114D3065-1	1800	1800	300 1200
	-2	1800	1800	
	114D3067-2			
	-3	1800	1800	
	-4			
-5	1800	1800		
Engine, drive shaft assemblies	114D3003-1	1800	1800	
	-4	1800	1800	
Forward rotary wing head	114R2001-1	1800	*	
	-5	1800	*	
	-7	1800	*	
	-9	1800	*	
	-11	1800	*	
	-13	1800	*	
	114R2003-1	*	600	
Aft rotary wing head	114R2001-2	1800	*	
	-6	1800	*	
	-8	1800	*	
	-10	1800	*	
	-12	1800	*	
	-14	1800	*	
	114R2002-2	1800	*	
	114R2004-2	*	600	
Forward swashplate assemblies	114R3304-1	200	*	
	-3	200	*	
	-5	200	*	
	-13	800	*	
	-15	800	*	
	-501	600	*	
	-503	600	*	
	-505	600	*	
	-507	600	*	
	114RK701-5	600	*	
	-7	600	*	
	114R3305-1	800	*	
	-3	800	*	
	-5	800	*	
	-7	800	*	
	114R3505-1	*	600	
	-2	*	600	
*Shall not be installed in the aircraft model indicated.				

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Aft swashplate assemblies	114R3304-2	200	*	
	-4	200	*	
	-6	200	*	
	-14	800	*	
	-16	800	*	
	-502	600	*	
	-504	600	*	
	-506	600	*	
	-508	600	*	
	114RK701-6	600	*	
	-8	600	*	
	114R3305-2	800	*	
	-4	800	*	
	-6	800	*	
	-8	800	*	
	114R3505-1	*	600	
	-2	*	600	
Gas turbine engine T55-L-5	2-000-030-09	1500	*	
Gas turbine engine T55-L-7	2-000-030-12	1800	1800	
Gas turbine engine T55-L-7B	2-000-030-18	1800	1800	
Gas turbine engine T55-L-7C	2-000-030-22	1800	1800	
Forward rotary wing blades	114R1002-27	**	*	3600
	-29	**	*	3600
	-31	**	*	3600
	-33	**	*	3600
	-35	**	*	3600
	-37	**	*	3600
	114R1502-9	*	**	
Aft rotary wing blades	114R1002-28	**	*	2400
	-30	**	*	2400
	-32	**	*	2400
	-34	**	*	2400
	-36	**	*	2400
	-38	**	*	2400
	114R1502-10	*	**	
Forward pivoting dual actuating cylinder	114H4000-11	300	*	
	-15	300	*	
	-19	1000	*	
	-21	300	*	
	-25	300	*	
	-27	1200	*	

*Shall not be installed in the aircraft model indicated.

**On condition removal.

Component	Part No.	Overhaul Interval		Retirement Interval
		CH-47A	CH-47B	
Forward pivoting dual actuating cylinder	114H4000-28	300	*	
	-29	1000	*	
	-31	1200	*	
	-33	1200	*	
	114H6600-3	*	1200	
Aft pivoting dual actuating cylinder	114H4000-12	300	*	
	-16	300	*	
	-20	1000	*	
	-24	300	*	
	-26	1200	*	
	-30	1000	*	
	-32	1200	*	
	-34	1200	*	
	114H6600-4	*	1200	
Forward swiveling dual actuating cylinder	114H4800-7	1000	*	
	-9	1000	*	
	-13	1000	*	
	-15	1000	*	
	-17	1200	*	
	-19	1200	*	
	-21	1000	*	
	-23	1200	*	
	-25	1200	*	
	-27	**	*	
	-29	**	*	
	114H6700-3	*	**	
Aft swiveling dual actuating cylinder	114H4800-8	1000	*	
	-10	1000	*	
	-14	1000	*	
	-16	1000	*	
	-18	1200	*	
	-20	1200	*	
	-22	1000	*	
	-24	1200	*	
	-26	1200	*	
	-28	**	*	
	-30	**	*	
	114H6700-4	*	**	
Forward and aft drive collar assembly	114R3388-1	**	*	
	-7	**	*	
	-5	**	**	700
Forward and aft upper drive arm assembly	114R3414-1	**	**	700
	-4	**	**	700
	-5	**	**	700
*Shall not be installed in the aircraft model indicated.				
**On condition removal.				

Component	Part No.	Overhaul Interval	Retirement Interval
Aft vertical drive shaft assembly	114D3002-1 through -6 Serial No. A-102 through A-114 A-149 through A-151, A-154 A-155 M-103 M-104 M-106 through M-111 M-115 M-117 through M-119 M-121 M-124 through M-130 M-132 M-134 M-135 M-137 through M-143 M-145 through M-160 M-163 through M-165 M-167 through M-174 M-179 M-180 M-185 M-187 M-188 M-190 through M-194 M-197 M-198 M-200 M-201 M-203 through M-205 M-210 M-213 M-214 M-217 M-221 M-224 M-225 through M-227 M-234 M-236 M-255 through M-258 M-274		Finite life 600
Aft vertical drive shaft assembly	114D3002-1 through -6 Serial No. A-118 M-162 M-166 M-176 M-182 M-183 M-189 M-209 M-218 M-222 M-223 M-228		Finite life 800

Component	Part No.	Overhaul Interval	Retirement Interval
Aft vertical drive shaft assembly	M-230 through M-232 M-235 M-237 M-238 M-240 M-242 M-246 M-251 through M-253		
Aft vertical drive shaft assembly	114D3002-1 through -6 Serial No. A-115 through A-117		Finite life 1000
Aft vertical drive shaft assembly	114D3002-1 through -6 Serial No. A-119 through A-148 A-152 A-153 A-156 through A-189 A-191 and subsequent "A" shaft assemblies M-177 M-178 M-184 M-186 M-195 M-196 M-199 M-202 M-206 through M-208 M-211 M-212 M-215 M-216 M-219		Finite life 1000
Aft vertical drive shaft assembly	114D3002-1 through -6 Serial No. M-220 M-229 M-233 M-239 M-243 through M-245 M-247 through M-250 M-254 M-259 through M-273 M-275 through M-278 M-280 M-282 through M-290 M-292 and subsequent "M" shaft assemblies		Finite life 1000

Component	Serial Number	Removal Time (Usage Since New)
Forward rotary wing drive transmission (114D1001)	A-7-48	400
	A-7-49	400
	A-7-68	400
	M-7-2	400
	M-7-5	400
	A-7-18	800
	A-7-21	800
	A-7-26	800
	A-7-36	800
	A-7-65	800
	A-7-83	800
	A-7-90	800
	A-7-185	800
	M-9-6	400
	M-9-9	400
	A-9-36	400
Aft rotary wing drive transmission (114D2001)	A-9-46	400
	A-9-48	400
	A-9-52	400
	A-9-53	400
	A-9-55	400
	A-9-56	400
	A-9-70	400
	A-9-42	600
	A-9-47	600
	A-9-69	600
	A-9-88	600
	A-9-97	600
	A-9-119	600
	A-9-157	600
Engine combining trans- mission (114D5001)	A-8-20	1200
	A-8-21	1200
	A-8-27	1200
	A-8-35	1200
	A-8-48	1200
	A-8-54	1200
	A-8-57	1200
	A-8-78	1200
	A-8-79	1200
	A-8-103	1200
	A-8-218	1200
Aft rotary wing drive shaft (vertical shaft) (114D3002)	M-139	1600

Component	Serial Number	Removal Time (Usage Since New)
Aft rotary wing head controls/swashplate* (114R3302, 114R3303, 114R3305)	A-81-46 (A-83-46)	300
	A-81-40 (A-83-40)	600
	A-81-41 (A-83-41)	600
	A-81-51 (A-83-51)	600
	A-81-52 (A-83-52)	600
	A-81-122 (A-83-122)	600
	A-81-132 (A-83-132)	600
	A-81-159 (A-83-159)	600
	A-81-160 (A-83-160)	600
	A-81-232 (A-83-232)	600
	A-81-328 (A-83-328)	600
	A-83-43	800
	A-81-53 (A-83-53)	800
	A-81-75 (A-83-75)	800
	A-81-76 (A-83-76)	800
	A-81-88 (A-83-88)	800
	A-81-90 (A-83-90)	800
	A-81-93 (A-83-93)	800
	A-81-111 (A-83-111)	800
	A-83-117	800
	A-81-118 (A-83-118)	800
	A-81-124 (A-83-124)	800
	A-81-126 (A-83-126)	800
	A-81-143 (A-83-143)	800
	A-81-144 (A-83-144)	800
	A-81-145 (A-83-145)	800
	A-81-153 (A-83-153)	800
	A-81-155 (A-83-155)	800
	A-81-156 (A-83-156)	800
	A-81-161 (A-83-161)	800
	A-81-165 (A-83-165)	800
	A-81-167 (A-83-167)	800
	A-81-181 (A-83-181)	800
	A-81-182 (A-83-182)	800
	A-81-184 (A-83-184)	800
	A-81-187 (A-83-187)	800
	A-81-202 (A-83-202)	800
	A-83-206	800

*Serial numbers A-81-xxx denote components which were last overhauled as head controls assemblies. Serial numbers (A-83-xxx) denote swashplate assemblies contained in the corresponding head controls assemblies. The swashplate assembly is the critical component which must be removed at the time indicated.

Component	Serial Number	Removal Time (Usage Since New)
Forward pivoting dual actuating cylinder (114H4000)	1136	500
	1355	1200
	1401	1200
	1410	1200
	1434	1200
	1469	1200
	1594	1200
Aft pivoting dual actuating cylinder (114H4000)	1034	300
	1050	300
	1057	300
	1082	300
	1096	1200
	1157	1200
	1191	1200
	1230	1200
	1231	1200
	1242	1200
	1289	1200
	1290	1200
	1291	1200
	1302	1200
	1329	1200
	1332	1200
	1335	1200
	1336	1200
	1343	1200
	1345	1200
	1354	1200
	1414	1200
	1445	1200
	1456	1200
	1458	1200
	1462	1200
	1463	1200
	1505	1200
	1507	1200
	1514	1200
	1515	1200
	1533	1200
	1534	1200
	1545	1200
	1566	1200
	1567	1200
	1609	1200
	1617	1200
	1623	1200
	1643	1200
	1645	1200
	1653	1200
	1655	1200
	1678	1200
	1679	1200
	1681	1200

Component	Serial Number	Removal Time (Usage Since New)
Aft pivoting dual actuating cylinder (114H4000)	1682	1200
	1694	1200
	1697	1200
	1718	1200
	1756	1200
	1762	1200
	1770	1200
	1854	1200
	2087	1200
	2141	1200

Active MWO's

55-1520-209-

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/1 Change 1	29 Jan 64 10 Jul 64	None	Waterproofing of overhead panel disconnect	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2411		x	x	
20/3 Change 1	6 Aug 63 11 May 64	None	Replacement of hydraulic oil cooler motor/fan	YCH-47A - 59-4985 JCH-47A 60-3448 and 60-3451 CH-47A - 61-2408		x	x	
20/13 Change 1	14 Feb 64 10 Jul 64	None	Reidentification of rotary wings	Rotary wings P/N 114R1002-1 (fwd) S/N A-1-1 thru A-1-141 P/N 114R1002-2 (aft) S/N A-2-1 thru A-2-131		x	x	
20/14 Change 1	2 Dec 63 10 Jul 64	None	Marking of magnetic brake mounting bolt torques	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425		x	x	
20/15 Change 1	29 Jan 64 10 Jul 64	None	Color coding of SAS lines	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2413		x	x	
20/16	9 Jul 65	None	Installation of cargo ramp door actuator drive shafts and trolley wheel axles	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425		x	x	
20/17	19 Mar 64	87	Addition of check valve in right-hand engine start return line	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2119		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/18 Change 1 2	4 Feb 65 11 May 65 27 May 65	106	Addition of protective cover to SAS feedback variable resistor	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7902		x	x	
20/19 Change 1	16 Jan 64 10 Jul 64	None	Replacement and inspection of screws in fairing skin on fuel pod	CH-47A 59-4982 thru 62-2120		x	x	
20/22 Change 2	11 Feb 64 29 Oct 64	65	Rewiring of generator control switches	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3456 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7915		x	x	
20/26 (Re- scinds DA mes- sage 36613, 2 Apr 64 & 40680, 29 Apr 64.)	1 May 64	107	Flight control hydraulic system - replacement of SAS control valves	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2116		x	x	
20/27	12 Oct 64	87	Replacement of hydraulic oil cooler solenoid control valve	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7914		x	x	
20/28	5 Aug 64	None	Replacement of utility pump pressure hose assembly	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2417		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/29 Change 1	2 Feb 66 2 May 66	87	Replacement of utility hydraulic system pump	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2124	x		x	
20/30	16 Jul 64	None	Redesign of synchronizing shaft adapter assembly	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7902 63-7904 thru 63-7908		x	x	
20/31 Change 2	12 Oct 64 6 Aug 65	None	Combining an engine transmission filter and relief valve assemblies	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3450 and 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2121 62-2123 thru 62-2137		x	x	
20/32	27 Apr 65	145	Replacement of Weston control valve with Kemp valve in cargo hook hy- draulic system	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3450 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13121		x	x	
20/34	19 Mar 64	None	Installation of cockpit panel pad	YCH-47A 59-4985 and 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/35	18 Nov 64	274	Replacement of flight control hydraulic boost return line tubing	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3450 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13131		x	x	
20/36	30 Dec 65	208	Replacement of emergency engine trim switches	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153		x	x	
20/39	5 Jan 66	None	Modification of fuel vent	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13115		x	x	
20/41 Change 3 (Super- sedes USAAV- COM Message SMOSM- EAC, 5- 1407, 19 May 65.)	17 May 66 26 Oct 67	339E	Removal of quick-disconnect couplings from transmission lubricating systems	YCH-47A 59-4983 thru 59-4986 (Kit A) JCH-47A 60-3448 thru 60-3452 (Kit A) CH-47A 61-2408 thru 61-2425 (Kit A) 62-2114 thru 62-2137 (Kit A) 63-7900 thru 63-7923 (Kit B) 64-13106 thru 64-13141 (Kit B)	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/42 Change 1	10 Jan 66 8 Mar 66	181	Revised litter pole stowage installation	CH-47A 63-7900 thru 63-7917		x	x	
20/43	6 Jan 66	None	Improved clamping of engine hoses	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13141 64-13142 thru 64-13153		x	x	
20/46	20 Sep 65	196	Removal of collective pitch rate controller	CH-47A 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13141		x	x	
20/49 Change 2	15 Mar 66 10 May 67	371E	Modification of pivoting dual actuating cylinders (114H4000-19, -20, -26, and -27)	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448, 60-3449, and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2133 62-2135 thru 62-2137 63-7900 thru 63-7902 63-7904 thru 63-7923 64-13106 thru 64-13109 64-13111 thru 64-13165 65-7966 thru 65-7973		x	x	
20/50	2 Dec 66	SMOSM- CH-47A -9	Installation of cargo hook loading pole stowage provisions	CH-47A 62-2120 and 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-7977	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/51 Change 2	28 Mar 66 9 Feb 67	391	Installation of cockpit rear view mirror	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 JCH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-19097 CH-47B 66-19098 thru 66-19131		x	x	
20/52 Change 1	3 Nov 66 9 Feb 67	396E	Addition of universal mounting bracket for tachometer generator	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-109		x	x	
20/53	25 May 66	None	Replacement of forward and combining transmis- sion chip detector plugs	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8017		x	x	
20/55	1 Sep 66	AMSAV- CH-47A- 5	Modification kit for en- gine chip detector wiring	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8004		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/57	28 Feb 68	423	Replacement of forward drive adapter assembly	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18469		x	x	
20/58	12 Jan 68	374R2	Replacement of rubber generator terminal nipples with fiberglass covers	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18469		x	x	
20/60 (Super- sedes MWO No. 30/64)	29 Dec 67	439	Modification to swash- plate lubrication system	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19063		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
20/61	11 Sep 67	395R	Removal of tunnel cover strut assemblies	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097		x	x	
20/62	27 Nov 67	534	Installation of check valve in utility hydraulic system	CH-47A 64-13154 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19068		x	x	
30/1	16 Feb 66	None	Elimination of potential binding in tunnel flight controls	YCH-47A 59-4983 and 59-4986 JCH-47A 60-3448 and 60-3449 CH-47A 60-3451 and 60-3452 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124		x	x	
30/2 Change 2	28 Jan 66 23 Sep 66	340	Installation of XM-24 mounting brackets	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 and 60-3449 60-3451 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8013	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/3 Change 1	14 Apr 66 22 Jul 66	323E	Relocation of engine cover support bracket and engine start relief valve	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 60-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13137		x	x	
30/4	10 Jan 66	325E	Aft rotor shaft thrust bearing filter installation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153		x	x	
30/5	21 Feb 68	SMOSM- CH-47A -1	Installation of high fre- quency (AN/ARC-102) radio antenna	CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18445	x		x	
30/15 Change 2	15 Feb 66 11 Apr 67	None	Installation of cable guide in pulley assembly cargo winch system	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 and 60-3449 60-3451 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-071 66-073 thru 66-125 66-19000 thru 66-19097 66-19098 thru 67-18474		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/16	27 Apr 66	None	Installation of emergency escape axe	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125	x		x	
30/17 Change 1	24 Nov 65 4 Apr 66	258	Installation of flight control closet panel	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-7989		x	x	
30/18 Change 1	26 Jul 66 22 Sep 66	348	Installation of velocity never exceed (VNE) com- puter	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-079		x	x	
30/19	27 Nov 67	232	Installation of jettisonable cabin windows	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-097		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/20 Change 1	7 Dec 67 28 Feb 68	233	Incorporation of aft jettisonable cargo door	YCH-47A (Kits A & B) 59-4983 thru 59-4986 (Kit A) JCH-47A (Kits A & B) 60-3448 thru 60-3452 CH-47A (Kits A & B) 61-2408 thru 61-2425 62-2114 thru 62-2137 CH-47A (Kit A) 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-117	x (Kit A only)		x	
30/22	5 Jun 67	332	Increase stability of one- man troop seat	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-077		x	x	
30/23	27 Dec 65	351	Overhead panel disconnect plug wiring bypass	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 65-8017		x	x	
30/24	2 Jan 68	None	Reinforce LH and RH bellcrank support assembly	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 and 60-3449 60-3451 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2133 62-2135 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13110		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/25	13 Feb 68	177	Installation of hydraulic test connections	Kit A for: YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13144 64-13146 thru 64-13148 and 64-13153 64-13155 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-077 Kit B for: 64-13145, 64-13149, 64-13151, and 64-13154	x		x	
30/26	6 Feb 68	303	Strengthening of ramp work platform brace assembly	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-087	x		x	
30/27	9 Jan 67	SMOSM- CH-47A- 10	Buffer board installation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-19097	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/28 (Super- sedes MWO No. 40/2)	26 Sep 66	53R1	Installation of centrifugal droop stops on aft rotary wing head	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-7970	x		x	
30/29 Change 1	28 Mar 66 3 Nov 67	218	Thrust balance capsules support bracket installation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13109		x	x	
30/30 Change 1	2 Oct 67 13 Nov 67	343	Protective covering for wiring bundles in aft pylon fairing	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19031	x		x	
30/31	3 Nov 66	337	Improve heater fuel line support at station 465.0	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19011		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/32	26 Jan 67	SMOSM- CH-47A- 6	Installation of pilot's and copilot's microphone foot switch	CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-19091		x	x	
30/34 Change 1	20 Apr 66 21 Jul 66	GY79	Modify aft 16 x 4.4 wheels to accommodate tube tires	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7921		x	x	
30/40	23 May 67	302	Revise differential collec- tive pitch (DCP) speed trim actuator travel	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19011		x	x	
30/41 Change 1 (Super- sedes MWO No. 30/43, 17 May 1966.)	11 May 67 7 Jul 67	370	Removal of rotor brake system	Kit A for: CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19028 Kit B for: YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/42 Change 1	9 Mar 67 28 Apr 67	290	Cargo hook circuit rede- sign	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-082		x	x	
30/48	18 Aug 67	409E	Replace upper controls hinge bolts, forward and aft rotor	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19042		x	x	
30/51 Change 1	28 Sep 67 3 Nov 67	SMOSM- CH-47A- 13	Inst allation of AS-1922 ()/ARC antenna	CH-47A 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18493		x	x	
30/53	18 Jan 68	419E	Pop-out indicator button on aft transmission filter	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/53	18 Jan 68	419E	Pop-out indicator button on aft transmission filter	CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18459		x	x	
30/55	17 Oct 67	456E	Modification to former station 482.0 side frame	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19041	x		x	
30/56 (Super- sedes MWO No. 30/14, 24 Feb 1966)	20 Mar 67	315 and 428E	Winch motor shaft seal protection <div data-bbox="540 1199 735 1402" style="border: 1px solid black; padding: 5px; margin-top: 10px;">64-13146 thru 64-13148 64-13150 64-13152 and 64-13153 64-13155 thru 64-13165</div>	Kits A and B for: CH-47A 62-2124 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13144 65-7966 thru 65-7967 Kit B for: 65-7968 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18463	x		x	
30/57	2 Jan 68	SMOSM- CH-47A- 13	Provisions for installation of radio set AN/ARC-51, radio set AN/ARC-54, voice security equipment TSEC/KY-28, and trans- ponder set AN/APX-72/44	CH-47A 62-2114 thru 62-2137		x	x	
30/58	13 Jan 68	SMOSM- CH-47A- 13	Provisions for installation of radio set AN/ARC-54, transponder set AN/APX- 72/44, and voice security equipment TSEC/KY-28	CH-47A 63-7900 thru 63-7923		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/59	17 Nov 67	SMOSM- CH-47A- 13 ECP's 444R and 469R	Installation of provisions for transponder set AN/APX-72/44 and voice security system TSEC/KY- 28	CH-47A 64-13106 thru 64-13165		x	x	
30/60	12 Jan 68	SMOSM- CH-47A- 13	Provisions for installation of transponder set AN/ APX-72/44 and voice security system TSEC/ KY-28	CH-47A 65-7966 thru 65-8025 66-066 thru 66-086		x	x	
30/65 Change 1	22 Mar 67 11 May 67	EGG-1	Installation of provisions for aircrew armor on ALSCO (PN AL 1031-3) pilot and copilot seats	CH-47A 65-8002 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143		x	x	
30/67	27 Jul 67	489E	Provisions for installation of engine air inlet screens	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-19097 CH-47B 66-19098 thru 66-19116	x		x	
30/68	8 Feb 68	426	Provisions for and instal- lation of T-55-L-7C engine	CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18451	x		x	
34/1 Change 1	5 Oct 63 10 Jul 64	15	Installation of rotor blade tracking provisions	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2418	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/2 Change 2	6 Aug 63 22 Jul 65	None	Installation of transformer rectifier	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2418		x	x	
34/7 Change 1	10 Feb 64 10 Jul 64	None	Installation of hydraulic brake master cylinders and pedal blocks	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2124		x	x	
34/8 Change 1 Change 3	5 Feb 64 10 Jul 64 2 May 66	None	Rerouting of wheel and rotor brake return lines	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2413		x	x	
34/11 Change 1	19 Jan 65 23 Jul 65	25A	Searchlight control modi- fication	YCH-47A 59-4985 and 59-4986 60-3448 thru 60-3450 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7922		x	x	
34/12	11 May 66	27A	Cockpit sliding doors	YCH-47A (Kit A) 59-4983 thru 59-4986 JCH-47A (Kit A) 60-3448 thru 60-3452 CH-47A (Kit A) 61-2408 thru 61-2424 CH-47A (Kit B) 61-2425 and 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13113	x		x	
34/13 Change 1	15 Jul 63 10 Jul 64	20	Replacement of dual stick- boost actuator	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 and 61-2409		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/17	13 Aug 64	33	Addition of bleed valve to hydraulic reservoir and hydraulic oil cooler bleed lines	YCH-47A (Kit A) 59-4985 JCH-47A (Kit A) 60-3448 thru 60-3452 CH-47A (Kit A) 61-2418 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2131 YCH-47A (Kit B) 59-4983, 59-4984, and 59-4986 CH-47A (Kit B) 61-2408 thru 61-2410 61-2412 thru 61-2417		x	x	
34/23	15 Jan 65	42	Aft pylon clamshell door restraining strap	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425		x	x	
34/24	14 Feb 64	None	Installation of engine transmission drive shaft and synchronizing drive shaft retainers	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425		x	x	
34/26 Change 2	11 Mar 64 22 Sep 66	None	Removal of AN/ASW-12 components	YCH-47A (Kit A) 59-4983 thru 59-4986 JCH-47A (Kit A) 60-3448 thru 60-3452 CH-47A (Kit A) 61-2408 and 61-2409 CH-47A (Kit B) 61-2410 thru 61-2413 CH-47A (Kit C) 61-2414 thru 61-2418	x Kits A and B		x	
34/28 Change 1	31 Jan 64 10 Jul 64	None	Installation of auxiliary drip pan forward pylon	YCH-47A - 59-4985 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2413		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/29 Change 1	26 Jul 66 22 Sep 66	311	Installation of fuel tank connections	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 and 60-3449 60-3451 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025		x	x	
34/30 Change 1	2 Jan 64 10 Jul 64	None	Replacement of magnetic brake link attaching bracket	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2416		x	x	
34/35	27 Apr 64	None	Miscellaneous watertightness	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425		x	x	
34/40	10 May 66	39	Replacement of existing oil tank with redesigned oil tank	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137	x		x	
34/41 Change 1	9 Apr 64 10 Jul 64	None	Wiring installation changes	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452	x		x	
34/43 Change 1	28 Sep 65 14 Apr 66	48	Installation of AFG utility hydraulic pump access door	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/45 Change 1	11 Dec 63 10 Jul 64	None	Modification of heater installation	YCH-47A 59-4984 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425	x			x
34/46 Change 1	10 Feb 64 10 Jul 64	None	Modification of pilot and copilot seat assembly	YCH-47A (Kit A) 59-4983 thru 59-4986 JCH-47A (Kit A) 60-3448 thru 60-3452 CH-47A (Kit A) 61-2408 thru 61-2417 CH-47A (Kit B) 61-2418 thru 61-2425 62-2114 thru 62-2116		x	x	
34/47	7 May 65	87	Replacement and rerouting of the hydraulic cooler fan motor return line	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2131		x	x	
34/48	29 Jan 65	52	Addition of thrust magnetic brake circuit breaker	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7922		x	x	
34/51 Change 1	22 Apr 64 10 Jan 68	None	Modification of parking brake	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2124		x	x	
34/53 Change 1	14 Feb 64 10 Jul 64	None	Replacement of bushing in forward and aft rotary wing head controls	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2421		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/54	20 Nov 64	109	Modification of engine start and ignition system	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3450 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 61-2124 62-2126 thru 62-2137		x	x	
34/56	29 Jan 65	101	Dual element filter in- stallation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7905	x		x	
34/57	15 Jan 65	87	Installation of provisions for depressurizing the No. 1 flight control hydraulic system	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7911		x	x	
34/58 Change 1	29 Jan 64 10 Jul 64	None	Flight controls-Removal of paint from centering spring shafts	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425		x	x	
34/60	15 Apr 64	None	Modification of engine access cowl hinge	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/61	14 Apr 64	None	Modification of the aft pylon fairing former	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2121		x	x	
34/62 Change 1	6 Mar 64 6 Aug 65	None	Modification of forward engine mounts	YCH-47A 59-4983, 59-4984, and 59-4986 JCH-47A 60-3449 thru 60-3452 CH-47A 61-2408 thru 61-2416		x	x	
34/63	19 Mar 64	None	Replacement of dual upper boost-shoulder boost	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2416 61-2417 thru 61-2425 62-2114 and 62-2115		x	x	
34/64	30 Sep 64	None	SAS System-Modification surge accumulators and drains installation	YCH-47A - Kit A 59-4983 thru 59-4986 JCH-47A - Kit A 60-3448 thru 60-3450 and 60-3452 CH-47A - Kit A 61-2408 thru 61-2412 CH-47A - Kit B 61-2413 thru 61-2425	x Kit B Only		x	
34/68	17 Jan 65	67	Engine starter motor re- turn line replacement	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2417		x	x	
34/69 Change 1	30 Dec 65 3 Mar 66	77R1	Installation of yaw damper and improved yaw spring	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13113	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/70 Change 1	2 Feb 66 14 Feb 68	116	Modification of aft pylon clamshell doors	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-7980		x	x	
34/74 Change 1 Change 2	20 Sep 65 15 Oct 65 10 May 67	115	Weight and balance reference datum revision	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13116		x	x	
34/75	10 Feb 66	61	Installation of SAS emergency release	YCH-47A (Kit B) 59-4983 thru 59-4986 JCH-47A (Kit B) 60-3448 thru 60-3452 CH-47A (Kit A) 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13122		x	x	
34/77	1 Sep 65	57	Extended antiskid walk- ways	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13118	x		x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/84	31 Aug 64	105	Replacement of extensi- ble link electro-hydraulic servo valve	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137		x	x	
34/85 Change 1	11 Apr 67 9 Jan 68	None	Tunnel cover latch re- tainers	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2119	x		x	
34/89 Change 1	7 Apr 65 18 Oct 66	None	Installation of reservoir pressure accumulator	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7914	x		x	
34/91	24 Feb 65	None	Utility hydraulic system bleed valves	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7914		x	x	
34/92	16 Oct 64	None	Revision of engine droop eliminator variable resis- tor installation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2131		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/95	21 Aug 64	None	Modification of the rescue hoist system	YCH-47A (Kits B & C) 59-4983 thru 59-4986 JCH-47A (Kits A & C) 60-3448 thru 60-3450 JCH-47A (Kits B & C) 60-3451 and 60-3452 CH-47A (Kits B & C) 61-2408 thru 61-2425 CH-47A (Kits A & C) 62-2114 thru 62-2121 62-2123 and 62-2124		x	x	
34/96	19 Aug 64	None	Installation of support fittings for improved rigging procedure	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2415		x	x	
34/97	20 Oct 64	None	Installation of automatic speed trim system	CH-47A Kit B for: 59-4983 thru 59-4986 60-3448 and 60-3449 62-2114 thru 62-2116 Kit A for: 60-3450 thru 60-3452 61-2408 thru 61-2425		x	x	
34/100 Change 3	11 Jan 66 10 Jan 68	68	Rework of pilot and co- pilot seats	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137	x		x	
34/104	20 May 65	None	Modification of beam assem- bly for aircraft hoisting	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 thru 62-2137 63-7900 thru 63-7920		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/105	1 Dec 65	None	Connecting link-thrust control	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425		x	x	
34/107	18 Nov 66	191E	Redesign of SAS extensi- ble links	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923	x			x
34/108	10 Feb 66	228E	Modification of generator control circuit	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923		x	x	
34/109	5 Dec 66	212E	Reinforcement for blower support structure	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7902	x		x	
34/110 Change 3	24 Feb 65 17 Aug 66	131	Modification of forward crown aft pylon	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3450 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2126 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-7980		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/111	5 Jan 66	248E	Replacement of flight control hydraulic reservoir support brackets	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13121		x	x	
34/112	10 Jan 66	None	Modification of thrust bearing support, aft pylon	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 and 61-2409 61-2410 thru 64-13131		x	x	
34/113	30 Aug 67	49R1	Cabin door descent delay	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153	not available		x	
34/114	21 Apr 66	60R1	Installation of modified hydraulic pump handle	CH-47A 62-2124 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153	x		x	
34/115	13 Sep 65	152	Modification of cargo hook carriage	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3449 60-3451 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13126		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/116	27 Jun 66	143	Improved ADF sense antenna	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13141	x		x	
34/118 Change 1	17 Jun 66 10 Nov 66	154	Installation of flight control hydraulic return line check valves	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165	x		x	
34/119	4 May 66	189	Relocation of troop alarm and jump light	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137		x	x	
34/121	11 May 67	123	Windshield wiper system modification	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153		x	x	
34/122	23 Feb 67	126	Improved design of rescue hoist cable cutter	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/124 Change 1	16 Jun 67 28 Aug 67	259	Rerouting and replacement of flight control and utility system hydraulic lines	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13141	x		x	
34/125	14 Jun 67	264	Relocation of transmission lubrication hoses	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13141	x		x	
34/131 Change 1	29 Jul 66 20 Mar 67	201	Deletion of engine speed sensing switch	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13153	x		x	
34/132	14 Jul 65	284	Additional support for defueling valve	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13113		x	x	
34/133	19 Apr 66	289E	Strengthening of rotor blade forward shear tie	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13141		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	WT & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
34/134	6 Aug 65	None	Reinforcement of the aft pivoting actuator support structure	YCH-47A 59-4982 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13131		x	x	
34/135	31 Jan 68	282E	Remote indication of chips for aft rotor shaft	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165	x		x	
34/137 Change 1	26 Jul 66 20 Mar 67	238	Elimination of hydraulic filter bypass	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137	unavail- able		x	
40/3 Change 1	3 May 67 28 Aug 67	GY-71	Improve corrosion resistance of wheel assembly (9542521) and modify wheel assembly (9543362)	CH-47A 63-7903, 63-7922, and 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025		x	x	
40/4 Change 1 Change 3 Change 4	10 Jan 66 11 Mar 66 13 Apr 67 16 Oct 67	None	Service life improvement of dual boost actuating cylinders	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448, 60-3449, 60-3451, and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2133 62-2135 thru 62-2137 63-7900 thru 63-7902 63-7904 thru 63-7923 64-13106 thru 64-13109 64-13111 thru 64-13165 65-7966 thru 65-7989		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
40/8	7 Jul 67	333	Engine exhaust pipe reinforcement	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-117	x		x	
40/9 Change 1 Change 2	29 Nov 67 6 Feb 68 11 Apr 68	373	Retrofit of limited-life parts in aft thrust bearing support structure	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13131	x		x	
30/9	24 May 67	330E	Installation of T-366()/ ARC emergency VFH transmitter provisions	CH-47A 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-086	x		x	
30/54 Change 1	27 Dec 67 13 Mar 68	SMOSM- CH-47A- 11	Installation of ambient noise filters	CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097 CH-47B 66-19098 thru 66-19143 67-18432 thru 67-18493	x		x	
30/86	6 May 68	A-C0001- CH-47	Alignment holes in engine control linkage	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-117		x	x	

MWO No.	Date	ECP No.	Title	Aircraft or Comp Affected	Wt & Bal Change		Record on 2408-5	
					Yes	No	Yes	No
30/88	17 May 68	456	Dual actuating cylinder external boot installation	YCH-47A 59-4984 and 59-4985 JCH-47A 60-3451 CH-47A 61-2408 thru 61-2410 61-2415 thru 61-2417 61-2419 thru 61-2425 62-2114 thru 62-2118 62-2120 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165 65-7966 thru 65-8025 66-066 thru 66-125 66-19000 thru 66-19097		x	x	
34/3	28 Mar 63	16	Increased strength troop seat and litter installation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425	x		x	
34/16	24 Feb 65	Unknown	Modification of thrust grip assembly	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 and 61-2413	x			x
34/129 Change 2	15 Apr 66 3 Nov 67	153	Engine and transmission chip detector system installation	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 thru 60-3452 CH-47A 61-2408 thru 61-2425 62-2114 thru 62-2137 63-7900 thru 63-7923 64-13106 thru 64-13165	x		x	
34/130 Change 1	9 Feb 66 16 Jan 68	277E	Addition of reinforcing rings to swashplate drive collar	YCH-47A 59-4983 thru 59-4986 JCH-47A 60-3448 and 60-3449 60-3451 and 60-3452 CH-47A 61-2408 thru 61-2410 61-2412 thru 61-2425 62-2114 thru 62-2121 62-2123 and 62-2124 62-2127 thru 62-2137 63-7900 thru 63-7923	x		x	

Nonactive MWO's

The following MWO's have been cancelled (C), rescinded (R), superseded (S), or have not been published (NP).

MWO No.	ECP No.	Title
55-1520-209-20/2 (R)	None	Installation of revised transmission oil temperature indicator and selector switch
-20/4 (R)	None	Replacement of utility hydraulic system high pressure relief valve
-20/5 (R)	None	Landing gear axle extension
-20/6 (R)	None	Updating of luminous instrument range markings
-20/7 (R)	None	Replace and safety engine transmission fairing retaining bolts
-20/8 (R)	None	Installation of transmission oil level sight gage retainer plates
-20/9 (R)	None	Replacement of thermal switch in utility hydraulic system
-20/10 (R)	None	Replacement of union on accessory gearbox valve
-20/11 (R)	None	Replacement of accessory gearbox drive motor
-20/12 (S)	None	Removal of rotor brake
-20/20 (R)	None	Addition of frequency identification to emergency VHF control panel
-20/21 (R)	None	Installation of litter pole stowage guard assemblies
-20/23 (C)	None	Replacement of cargo hook emergency release switch
-20/24 (R)	None	Replacement of hydraulic boost control switch
-20/25 (R)	87	Replacement of the accessory gearbox motor valve
-20/33 (C)	229E	Installation of vibration isolator oil pressure transducer
-20/37 (C)	292	Probe shims
-20/38 (S)	218	Thrust balance capsule support bracket installation
-20/40 (S)	310E	Safety guard for rotor brake control switch
-20/44 (S)	351E	Overhead panel disconnect plug wiring bypass (See MWO No. -30/23)
-20/45 (C)	None	Change in a.c. circuit breaker box
-20/47 (NP)	SMOSM-CH-47-7	Installation of aircrew armor kit

MWO No.	ECP No.	Title
55-1520-209-20/48 (C)	351	Revise and replace overhead control panel, electrical disconnect (See MWO -20/44)
-20/54 (C)	EGG-1	Installation of aircrew armor plates/pilot/copilot seats
-20/56 (NP)	455E	Change of engine transmission chip detector wiring harness connector
-20/59 (NP)	516E	Add engine inlet screens
-30/6 (NP)	SMOSM-CH-47A-1	Installation of HF (AN/ARC-102) wiring harness, FY 63-64 aircraft
-30/7 (NP)	SMOSM-CH-47A-1	Installation of HF (AN/ARC-102) wiring harness, FY 61-62 aircraft
-30/8 (NP)	None	Decca installation
-30/10 (NP)	None	Static discharge system
-30/11 (NP)	316	Troop commander HF and FM transmitter facility
-30/12 (C)	40R2	Retrofit of self-sealing fuel cells
-30/13 (C)	26R1	Interim anchor line kit
-30/14 (S)	315	Winch motor shaft seal protection
-30/21 (S)	333	Exhaust pipe reinforcement (See MWO No. -40/8)
-30/33 (C)	373E	Retrofit of limited-life parts in aft thrust bearing support structure (See MWO No. -40/9)
-30/35 (NP)	SMOSM-CH-47A-12	Gunner's interphone station (XM-24 subsystem)
-30/36 (C)	None	Retrofit of AN/ARC-54 radio sets
-30/37 (C)	None	Retrofit of AN/ARC radio sets
-30/38 (C)	None	Interphone noise
-30/39 (NP)	None	Add line filter to AN/ARC radio set
-30/43 (S)	None	Deactivation of CH-47A rotor brake system
-30/44 (NP)	376	Addition of formation lights on fuselage
-30/45 (NP)	392E	Reduce pressure of 114HS123 engine starter relief valve

MWO No.	ECP No.	Title
55-1520-209-30/46 (NP)	345VE	Combine voltage regulation and protection panel installation
-30/47 (NP)	346	Installation of emergency exit lighting system
-30/49 (C)	None	Complete provisions for KY-28 subsystem in FY 62, 63, 64, and 65 aircraft
-30/50 (C)	None	Complete provisions for AN/APX-72/44 in FY 62, 63, 64, and 65 aircraft
-30/52 (NP)	418E	Pop-out indicator button on the forward transmission filter
-30/61 (NP)	SMOSM-CH-47A-13	Installation of complete provisions for AN/APX-72/44 in CH-47A aircraft, 66-087 through 66-19097
-30/62 (NP)	245R2	Installation of hydraulic pressure transmitter shock mount
-30/63 (NP)	413	Improved engine fire detection system
-30/64 (C)	439	Incorporate grease lubrication on swashplate assemblies (See MWO No. -20/60)
-30/66 (NP)	466	Protect blade tiedown hole from erosion
-30/69 (NP)	458	Modify aft bellcrank support assembly
-30/70 (NP)	459	Aft pylon former station 502
-34/4 (R)	73	Droop stop replacement
-34/5 (C)	None	Replacement of actuator damper washers
-34/6 (R)	44	Desensitization of yaw controls
-34/9 (R)	None	Modification of right-hand aft work platform cowling stop
-34/10 (S)	None	Installation of rotor brake valve
-34/14 (R)	None	Installation of anchor points for azimuth drive of maintenance crane
-34/15 (R)	None	Replacement of extensible link servo-valve
-34/18 (R)	None	Installation of an improved synchronizer assembly in external cargo hook
-34/19 (R)	None	Installation of balance capsule thrust control lever
-34/20 (R)	None	Rerouting of aft pod fuel lines
-34/21 (R)	None	Replacement of droop stop retaining bolts
-34/22 (R)	None	Additional support for aft end of auxiliary power unit
-34/25 (R)	None	Installation of modified aft longitudinal cyclic trim actuator

MWO No.	ECP No.	Title
55-1520-209-34/27 (R)	None	Modification of engine control system
-34/31 (R)	None	Replacement of dual stick boost actuator pivot bolts
-34/32 (R)	None	Installation of waterproof boots on forward and aft weather protective cover assemblies
-34/33 (R)	None	Installation of maintenance crane base plate attachment receptacles
-34/34 (R)	None	Installation of transmission check valves
-34/36 (R)	None	Addition of viscous damper to longitudinal control
-34/37 (R)	None	Modification of interphone connecting box
-34/38 (R)	None	Replacement and reidentification of engine mechanical transmission
-34/39 (R)	None	Replacement of engine control link rod assemblies
-34/42 (R)	35.2	Installation of additional transmission oil cooler
-34/44 (C)	None	Revision of HF antenna installation
-34/49 (R)	None	Revision of marker beacon wiring
-34/50 (R)	None	Installation of starter motor relief valve
-34/52 (R)	None	Installation of camloc on lower engine access panel
-34/55 (C)	90	Installation of increased flotation landing gear
-34/59 (R)	None	Installation of viscous damper in roll control system
-34/65 (C)	None	Installation of MK8A Decca navigator
-34/66 (R)	160	Reinforce aft left-hand bellcrank support assembly
-34/67 (C)	56	Relocation of aft end of overhead panel
-34/71 (R)	108	Relocation of engine transmission oil pressure pickup
-34/72 (R)	104	SAS improvements
-34/73 (R)	None	Installation of engine transmission and drive shaft fairing bolt retention band
-34/76 (NP)	119	Rerouting of aft section hydraulic lines
-34/78 (C)	88	Improved acoustical insulation
-34/79 (C)	91	Installation of aft landing gear power steering system
-34/80 (R)	161	Blade delamination repair

MWO No.	ECP No.	Title
55-1520-209-34/81 (R)	179	Rotor blade drain holes
-34/82 (R)	180	Reinforcement of rotary wing blade tip cover
-34/83 (R)	206	Blade tip rib doublers
-34/86 (C)	None	New fuel boost pump
-34/87 (R)	None	Modification of aft landing gear swivel lock
-34/88 (C)	None	New thrust magnetic brake
-34/90 (C)	218	Stiffened thrust balance capsule
-34/93 (C)	194	Alternate installation of Bendix gyro type 14159-1A
-34/94 (R)	209	Improved rib to spar bond
-34/98 (NP)	26.2	Installation of parachute anchor line
-34/99 (C)	87	Provide provisions for cold weather start APP kit
-34/101 (NP)	121	Improved APU starting to -65°
-34/102 (S)	None	Modification and installation of the rotor brake
-34/103 (C)	192	Modification kit for isolated cargo floor
-34/106 (R)	None	Modernization modification summary
-34/117 (C)	None	Flight control filter-reservoir return line modification (See MWO No. -20/35)
-34/120 (NP)	176	Utility hydraulic system return line filter, dual element
-34/123 (C)	175	Redesigned engine transmission quill shaft
-34/126 (C)	140	Longitudinal cyclic swashplate support aft rotor head
-34/127 (C)	190	Forward rotor head (Same as MWO No. -34/126)
-34/128 (NP)	SMOSM CH-47A- 2	Installation of ARA-31 homing antenna
-34/136 (C)	268E	Replacement of aft rotor shaft thrust bearing
-34/138 (C)	258	Installation of backup structure
-34/139 (C)	None	Aft upper bellcrank support assembly (Replaced by MWO No. -30/24.)
-40/1 (C)	LY-GT- 55-13	Installation of improved No. 1 bearing, T55-L-7 engine
-40/2 (C)	53R1	Installation of centrifugal droop stop on aft rotor (See MWO No. -30/28)

MWO No.	ECP No.	Title
55-1520-209-40/5 (C)	SMOSM-CH-47A-8	Structural provisions to accommodate .30 caliber critical component armor
-40/6 (C)	LSI-51250-003-1	Replace existing diodes and one resistor and replace with higher rated components
-40/7 (C)	394	Replace spring in engine transmission filter valve with softer spring
-50/1 (R)	72	Installation of broached cages in forward and aft transmissions
-50/2 (NP)	None	Spiral bevel pinion gear rework and sun gear bearing support bolt replacement

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